# Connecticut's Traffic Records System

1

## Traffic Records Coordinating Committee

**July 21, 2021**

*High-quality traffic records data is critical to effective safety programing, operational management, and strategic planning*

# Meeting Agenda



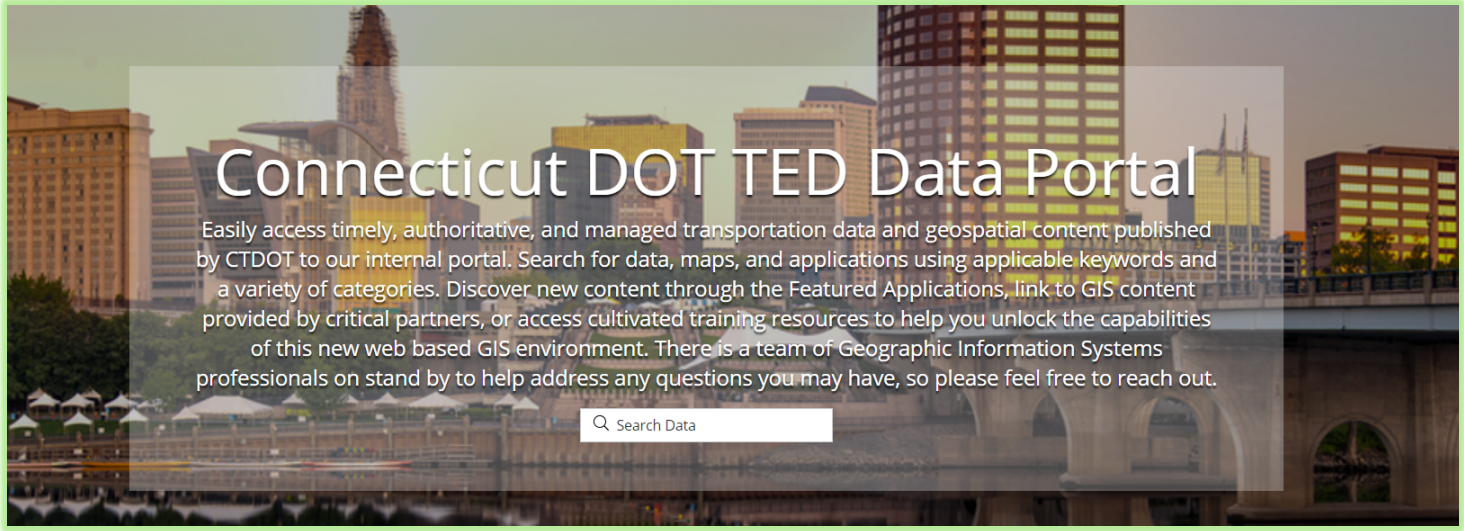
- Introduction
- Update on the DOT Transportation Enterprise Data Warehouse Project
- EMS Update
- Local Law Enforcement
- Child Safety In the Heat of the Summer
- Upcoming Traffic Records Assessment
- TRCC Website
- Open Forum
- Meeting Adjourned

# Transportation Enterprise Data Warehouse (TED) Project

Mario Damiata

# TED

## The Transportation Enterprise Data Mart




TED Enterprise Data Portal

*A Briefing for the CTDOT TRCC*
*July 21, 2021*

# TRCC Briefing Agenda

- **Quick Refresher: What TED Is All About**
  - Overview of TED Mission and Strategies
  - An Introduction To TED Key Players and Roles
- **Current Status of LRS development: Justin Brunetti, CTDOT**
  - New networks being added: multi use trails, bus/rail network, integration of multi modal systems, private roadways and commercial roads, State park and forest roads, possible baseline inventory of tribal roads
- **Roadway Data Attributes Being Added to the 2020 Roadway Inventory: Facundo Dominguez**
  - New MIRE Data Sets Accessible in the Portal
  - AADT Data
- **Crash Data Dashboard: Aaron Nash, UCONN**
  - Review of emphasis area tabs and how to query
  - Plans for public facing access
- **A Navigational Walk Through of the TED Agency Portal: Greg Ciparelli, EGIS Unit**
  - Featured Web apps and maps
  - Demonstration of roadway attribute dashboard
- **Open Discussion and Questions: TED Team**
  - Safety data needs of TRCC members

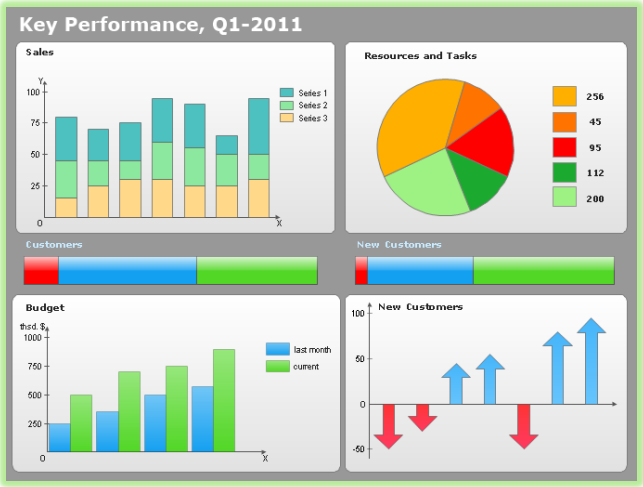
# A Quick Refresher: What TED Is All About

## Our Collective Vision

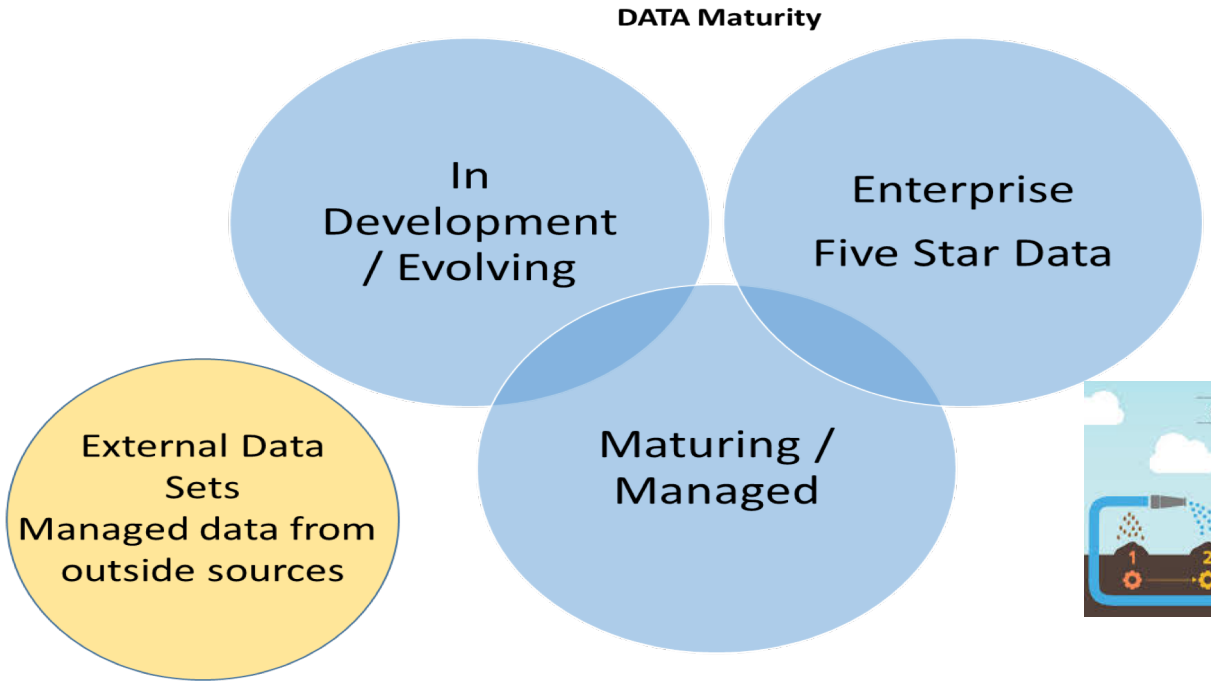
- Optimize the flow of knowledge and information within the CTDOT to support smarter and better decision making both strategic and operational

## Our Consensus Driven Goal

- Create a single transportation enterprise data platform fed and maintained by authoritative data that supports the retrieval and analysis of Agency-wide information using multiple data visualization tools and methods

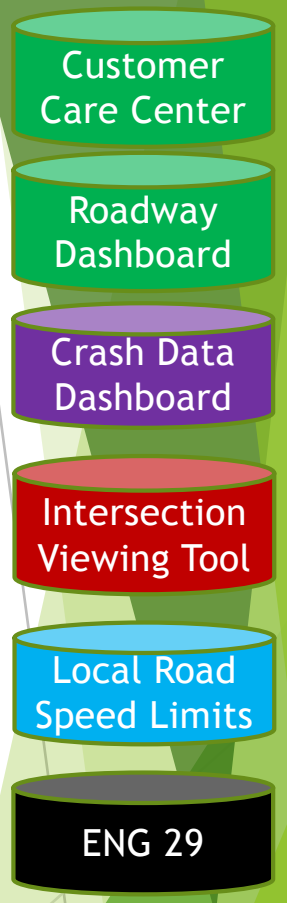



# Use GIS Tools and Applications To Move Data Through An Orderly Development and Maturation Process




# How the TED Engagement Process Has Worked for Pilot GIS Tools and Apps

- Multi disciplinary team meets with data stewards to identify data management needs
- Customer focused on current inventories, data gaps, and what the future should look like
- Uses an Agile development process – develop and test in small steps
  - Repeatedly meet to review status, new concepts and outline next development steps
- Review Meetings and requirements sessions
- Voice of the customer defines the end product
- User testing to assure solution meets business needs
- Finally, All Applications are field tested



# An Introduction To TED Key Players and Roles

**TED Advisory Group (aka- the coffee team)**

*Meets weekly, develops strategies, provides direction and guidance, monitors key tasks*

**Enterprise GIS (EGIS) Team**

*Monitors GIS licenses; works with IT in setting up database access, provides technical support, serves as GIS expert resource to DOT GIS Development*

**UCONN and VHB TED Sync Team**

*TED Architecture; documents processes and user manuals, GIS development and apps testing, support for TED Portal*

**GIS Standards /Change Management Team**

*Still emerging; lead contact for transactional databases; manage updates; first point of contact for asset data stewards; will help with data migration and testing;*

**IT Development Team**

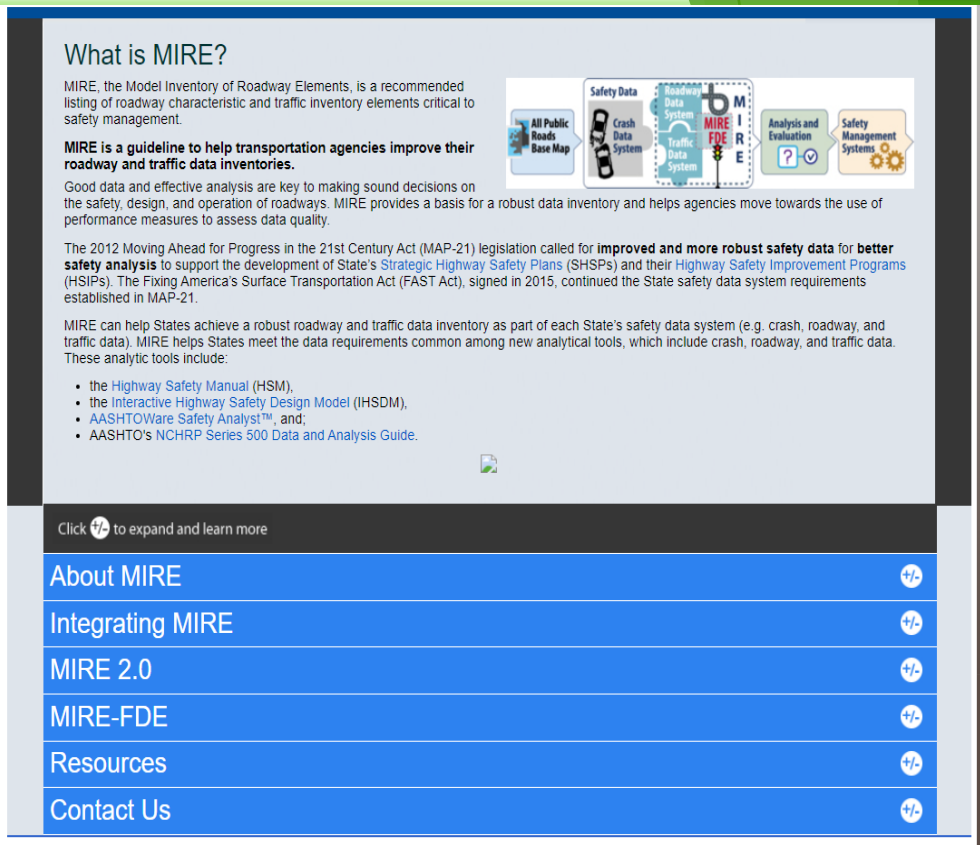
*Supports business requirements; Configures servers in Azure Cloud; develops TED Architecture at DOT; creates security and access rights; manages databases and xml schemas*

# Current Status of LRS Development:
# Justin Brunetti - CTDOT

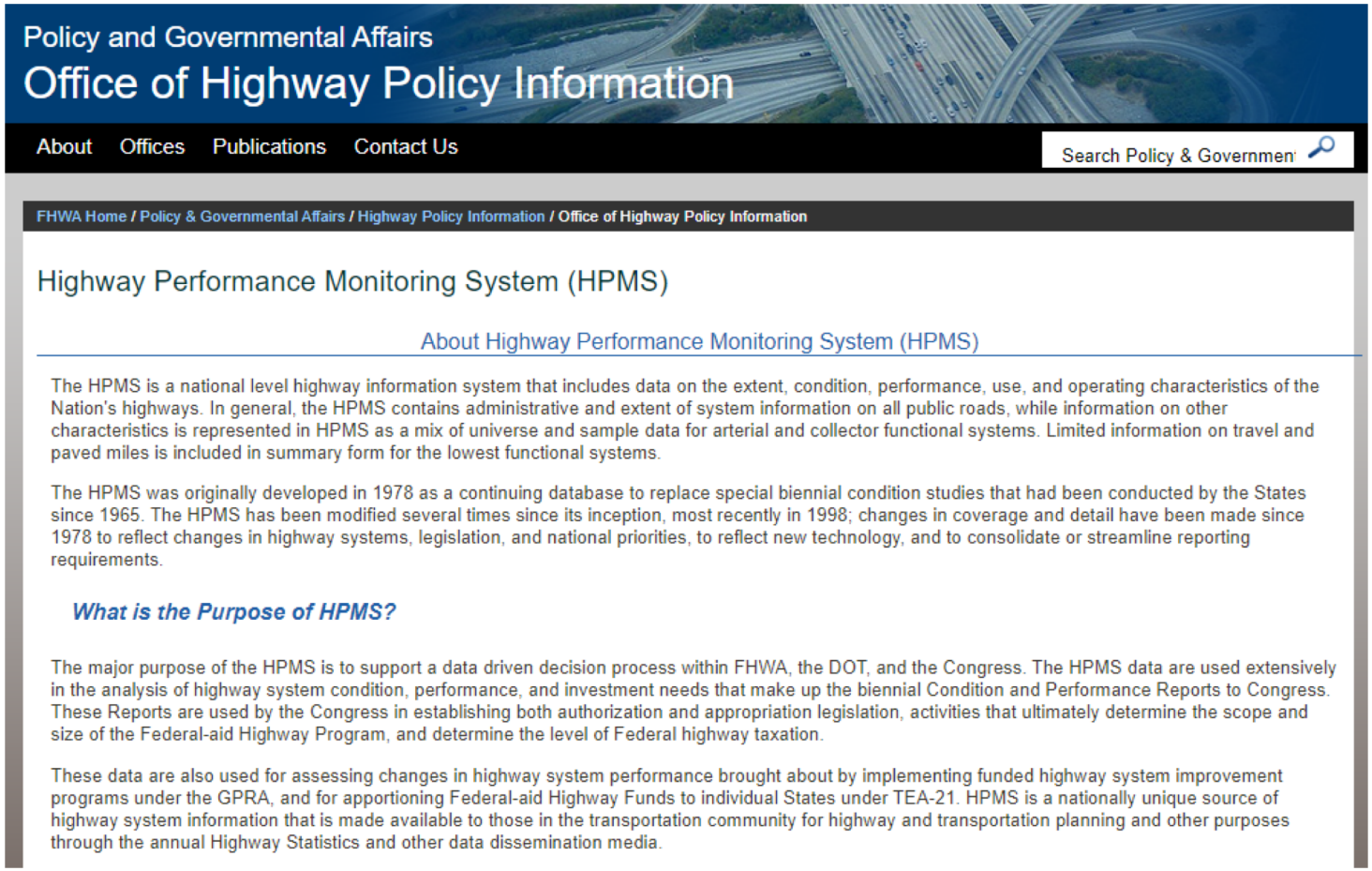
- Continued Expansion of LRS Capabilities
- Multi-Use Trails
- Bus/Rail Network
- Integration of Networks for Multi-Modal Planning
- Private Roads & Major Commercial Driveways
- State Park, Forest, and Institution Roads
- Federal Roads (e.g. DoD, Tribal Nation, etc.)

# Roadway Data Attributes Being Added to the 2020 Roadway Inventory:

## Facundo Dominguez




- New MIRE Data Sets Accessible in the Portal
- 35 Data Layers added from 2020 Snapshot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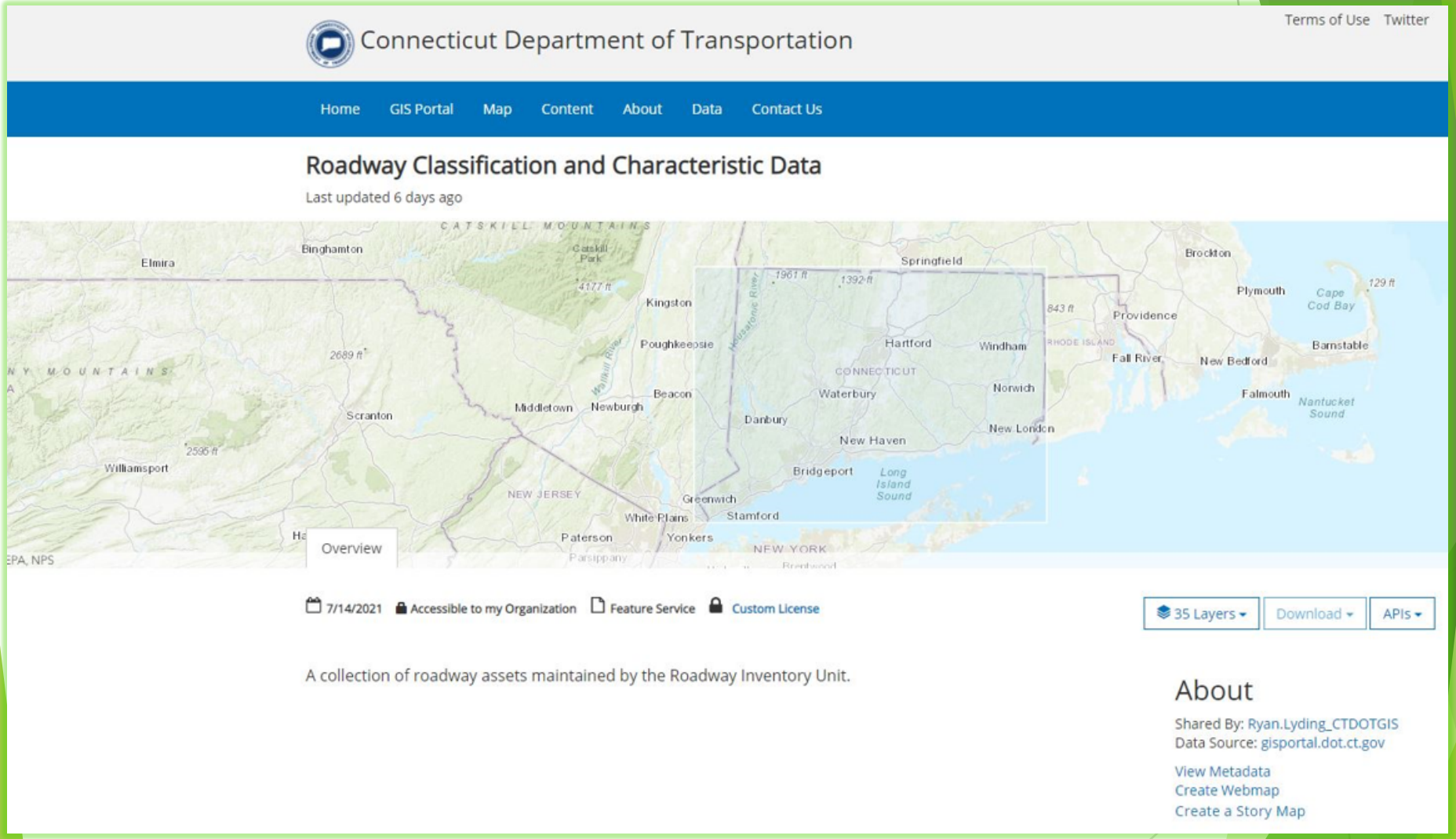
Highway Performance Monitoring System (HPMS)
About Highway Performance Monitoring System (HPMS)
The HPMS is a national level highway information system that includes data on the extent, condition, performance, use, and operating characteristics of the Nation's highways. In general, the HPMS contains administrative and extent of system information on all public roads, while information on other characteristics is represented in HPMS as a mix of universe and sample data for arterial and collector functional systems. Limited information on travel and paved miles is included in summary form for the lowest functional systems.
The HPMS was originally developed in 1978 as a continuing database to replace special biennial condition studies that had been conducted by the States since 1965. The HPMS has been modified several times since its inception, most recently in 1998; changes in coverage and detail have been made since 1978 to reflect changes in highway systems, legislation, and national priorities, to reflect new technology, and to consolidate or streamline reporting requirements.
What is the Purpose of HPMS?
The major purpose of the HPMS is to support a data driven decision process within FHWA, the DOT, and the Congress. The HPMS data are used extensively in the analysis of highway system condition, performance, and investment needs that make up the biennial Condition and Performance Reports to Congress. These Reports are used by the Congress in establishing both authorization and appropriation legislation, activities that ultimately determine the scope and size of the Federal-aid Highway Program, and determine the level of Federal highway taxation.
These data are also used for assessing changes in highway system performance brought about by implementing funded highway system improvement programs under the GPRA, and for apportioning Federal-aid Highway Funds to individual States under TEA-21. HPMS is a nationally unique source of highway system information that is made available to those in the transportation community for highway and transportation planning and other purposes through the annual Highway Statistics and other data dissemination media.

# Highway Performance Monitoring System HPMS Definition

- HPMS (Highway Performance Monitoring System) is an inventory of roadway extent, condition, performance, use and operating characteristics of the public roads with 70 data items and 7 Summary and Geospatial catalogs. Some of the data items are samples of roadway segments and others constitute a complete capture of data for that item. FHWA then translates this data to determine funding levels for each State.

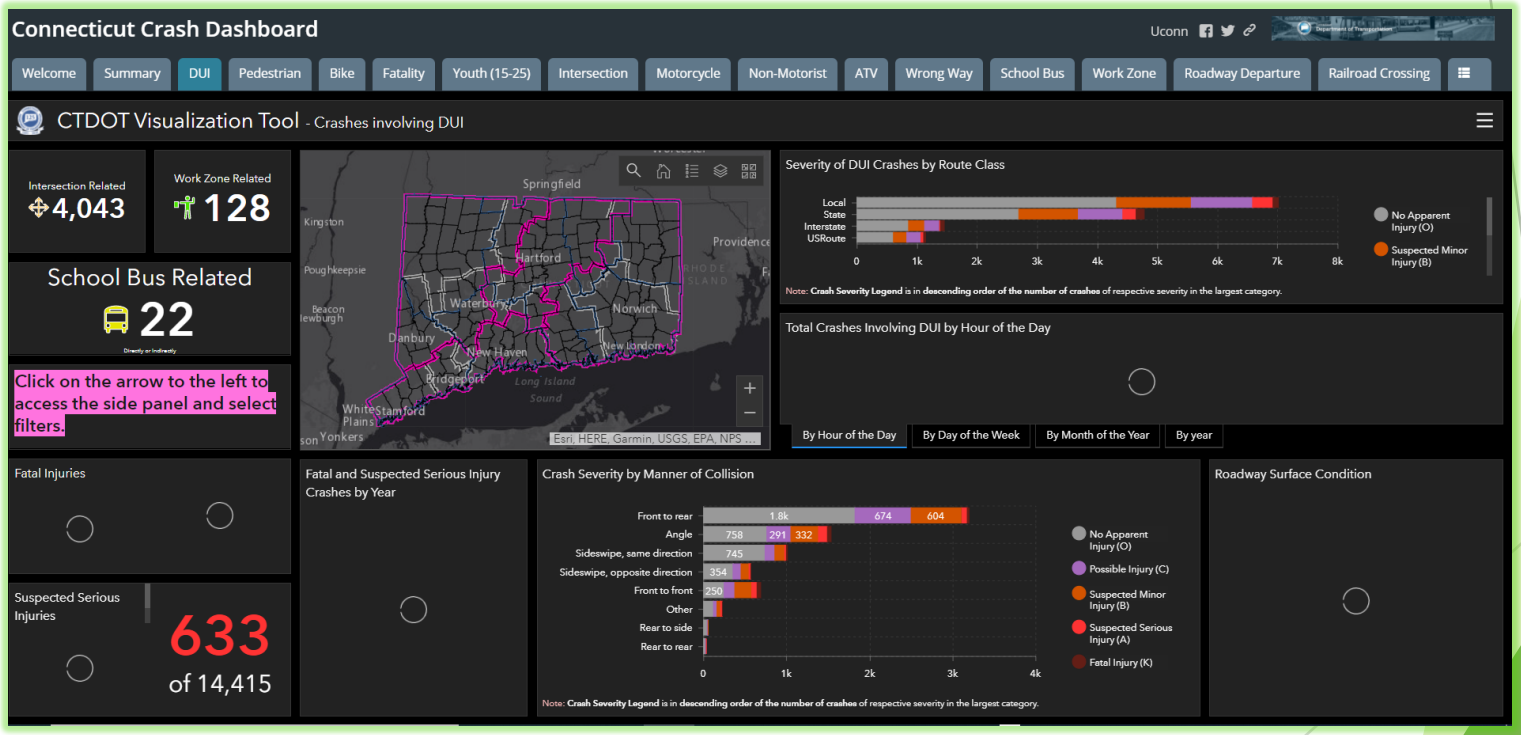

Connecticut Department of Transportation
Terms of Use
Twitter
Home
GIS Portal
Map
Content
About
Data
Contact Us
Roadway Classification and Characteristic Data
Last updated 6 days ago
Overview
7/14/2021
Accessible to my Organization
Feature Service
Custom License
35 Layers
Download
APIs
A collection of roadway assets maintained by the Roadway Inventory Unit.
About
Shared By: Ryan.Lyding_CTDOTGIS
Data Source: gisportal.dot.ct.gov
View Metadata
Create Webmap
Create a Story Map

| | Roadway Classification & Characteristic Data | HPMS # | HPMS Item | MIRE # | MIRE 2.0 FDE |
|---|---|---|---|---|---|
| 1 | Access Control | 5 | Access Control | 23 | Access Control |
| 2 | Facility Type | 3 | Facility Type | 93 | One/Two-Way Operations |
| 3 | Functional Class | 1 | Functional System | 19 | Functional Class |
| 4 | Highway Type | | | | |
| 5 | Legislative Bridge Names | | | | |
| 6 | Legislative State Route Names | | | | |
| 7 | Limited Access | | | | |
| 8 | National Highway System | 64 | National Highway System | 22 | Route Type |
| 9 | Private Roads | | | | |
| 10 | Roadway Borough Areas | | | | |
| 11 | Roadway Designated Urban Area | 2 | Urban Code | 20 | Rural/Urban Designation |
| 12 | Roadway Overlaps | | | | |
| 13 | Roadway Ownership | 6 | Ownership | 4 | Type of Governmental Ownership |
| 14 | Scenic Roads | | | | |
| 15 | State Route Local Names | | | | |
| 16 | Strahnet | 65 | Strategic Highway Network | | |
| 17 | Curbs | | | | |
| 18 | Exits | | | | |
| 19 | Intersections | | | 110,116,121 | Unique Jct Identifier/Jct Geometry/ Jct Traffic Control |
| 20 | Intersection Approaches | | | 129 | Unique Approach Identifier |
| 21 | Lanes | 7 | Through Lanes | 32 | Number of Through Lanes |
| 22 | Medians | | | 55 | Median Type |
| 23 | Rumble Strips | | | | |
| 24 | Runaway Truck Ramps | | | | |
| 25 | Shoulders | | | | |
| 26 | Complete Inventory Dates | | | | |
| 27 | Partial Inventory Dates | | | | |
| 28 | Roadway Permit Projects | | | | |
| 29 | Roadway Road Work | | | | |

| | Roadway Classification & Characteristic Data | HPMS # | HPMS Item | MIRE # | MIRE 2.0 FDE |
|---|---|---|---|---|---|
| 30 | HPMS Asset | 10-14, 29-42, 44, 46 | Peak Ln/Counter Peak Ln/Turn Ln Right/Turn Ln Left/Speed Limit/Signal Type/% Green Time/# Signals/# Stop Signs/* at Grade Other/Lane Width/Median Type/Median Width/Shoulder Type/Shld Width Right/Shld Width Left/Peak Parking/Widening Obstacle/Widening Potential/Terrain/% Passing Sight Distance | 55 | Median Type |
| 31 | HPMS Curves & Grades | 43,45 | Curve Classification/Grade Classification | | |
| 32 | HPMS Pavement Characteristics | 47-59 | IRI/PSR/Surface Type/Rutting/Faulting/Cracking %/Last Improved Year/Last Const Year/Last Ovly Thick/Thick Rigid/Thick Flexible/Base Type/Base Thick | 24 | Surface Type |
| 33 | HPMS Sample Sections | --- | Sample Panel | | |
| 34 | HPMS Traffic & AADT Data | 22-28, 69 | Single Unit Truck & Bus AADT/% Single Unit Truck & Bus AADT/Combination Truck AADT/% Combo Truck AADT/K Factor/Directional Factor/Future AADT/Future AADT Year/Capacity/Truck AADT/% Peak Truck/% Truck AADT | | |
| 35 | HPMS Truck | 66 | National Truck Network | | |

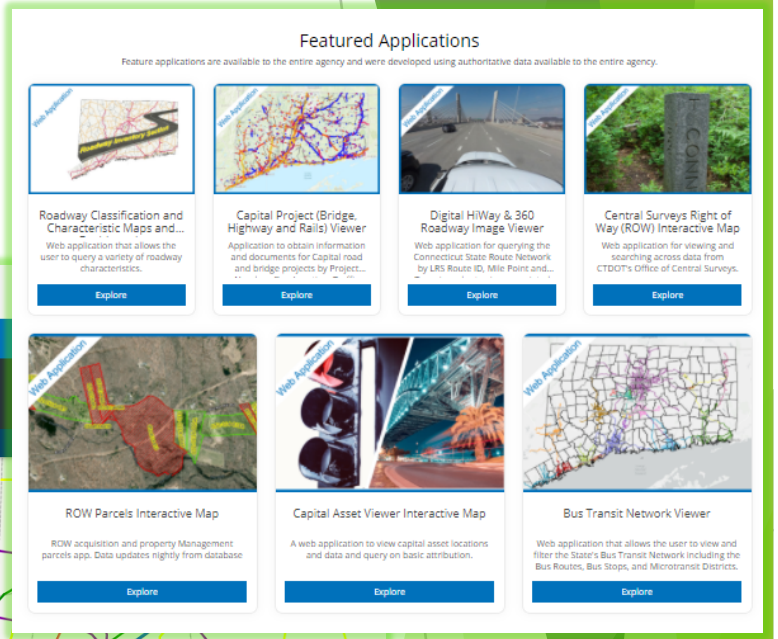
# Crash Data Dashboard: Aaron Nash, UCONN

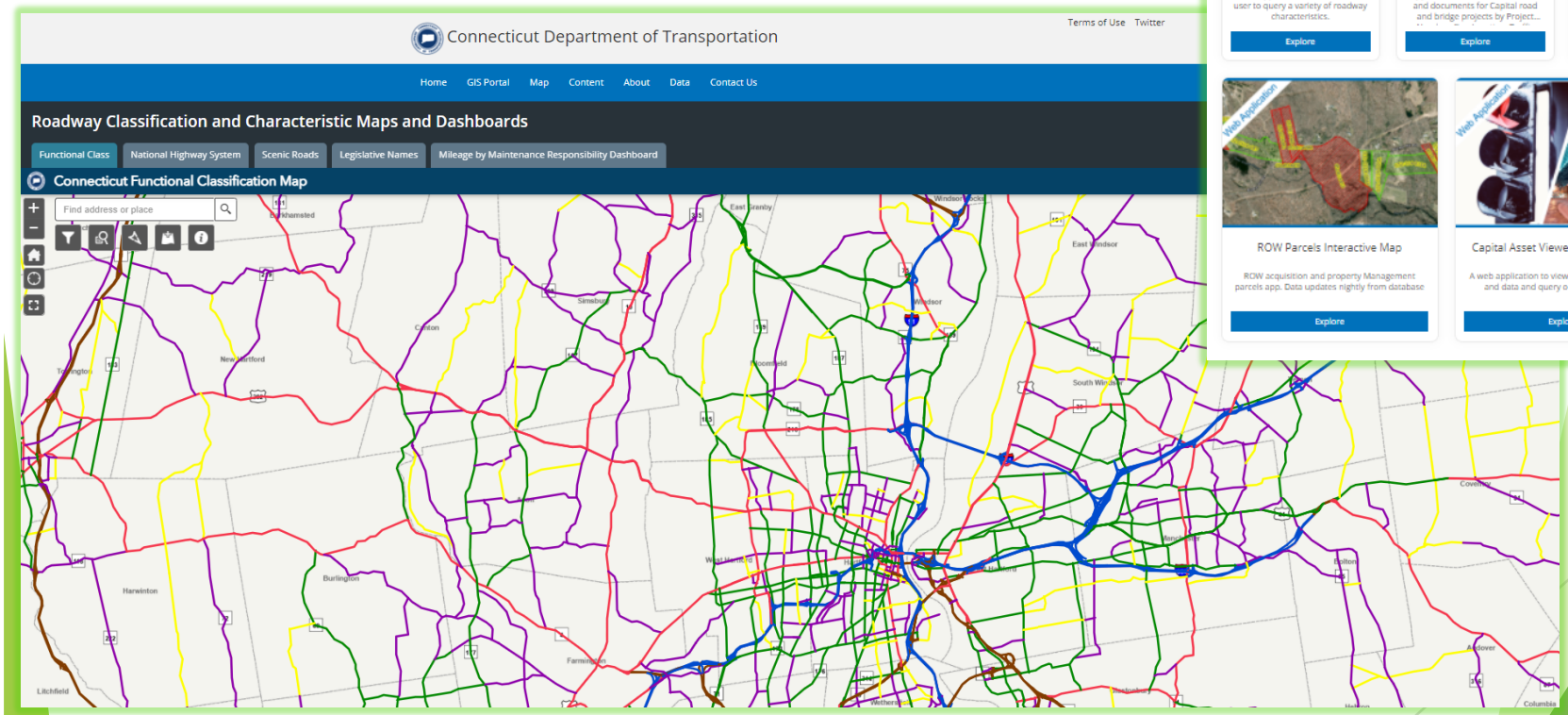
- Review of emphasis area tabs and how to query
- Plans for public facing access



# A Navigational Walk Through of the TED Agency Portal: Greg Ciparelli - EGIS Unit

- Featured Web apps and maps
- Demonstration of roadway attribute dashboard



# Questions
# Feedback
# Discussion

**What are the safety data needs of TRCC members?**

# EMS Update



# Emergency Medical Service

# (EMS)

# Project

# Update

Heidi Fitzgerald

# EMS 2021 3rd Quarter Traffic Statistics



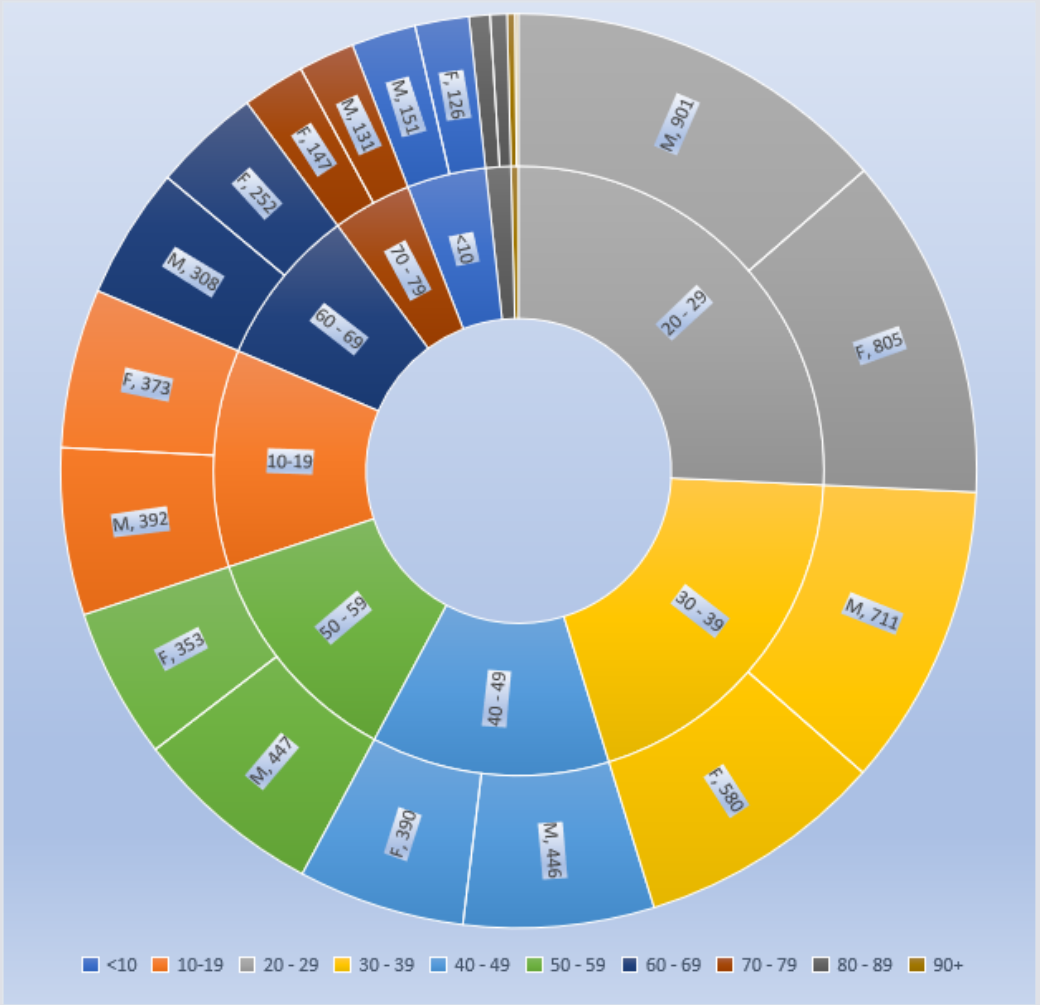
**Auto Crash Injury**

**by**

**Age Range**

**and**

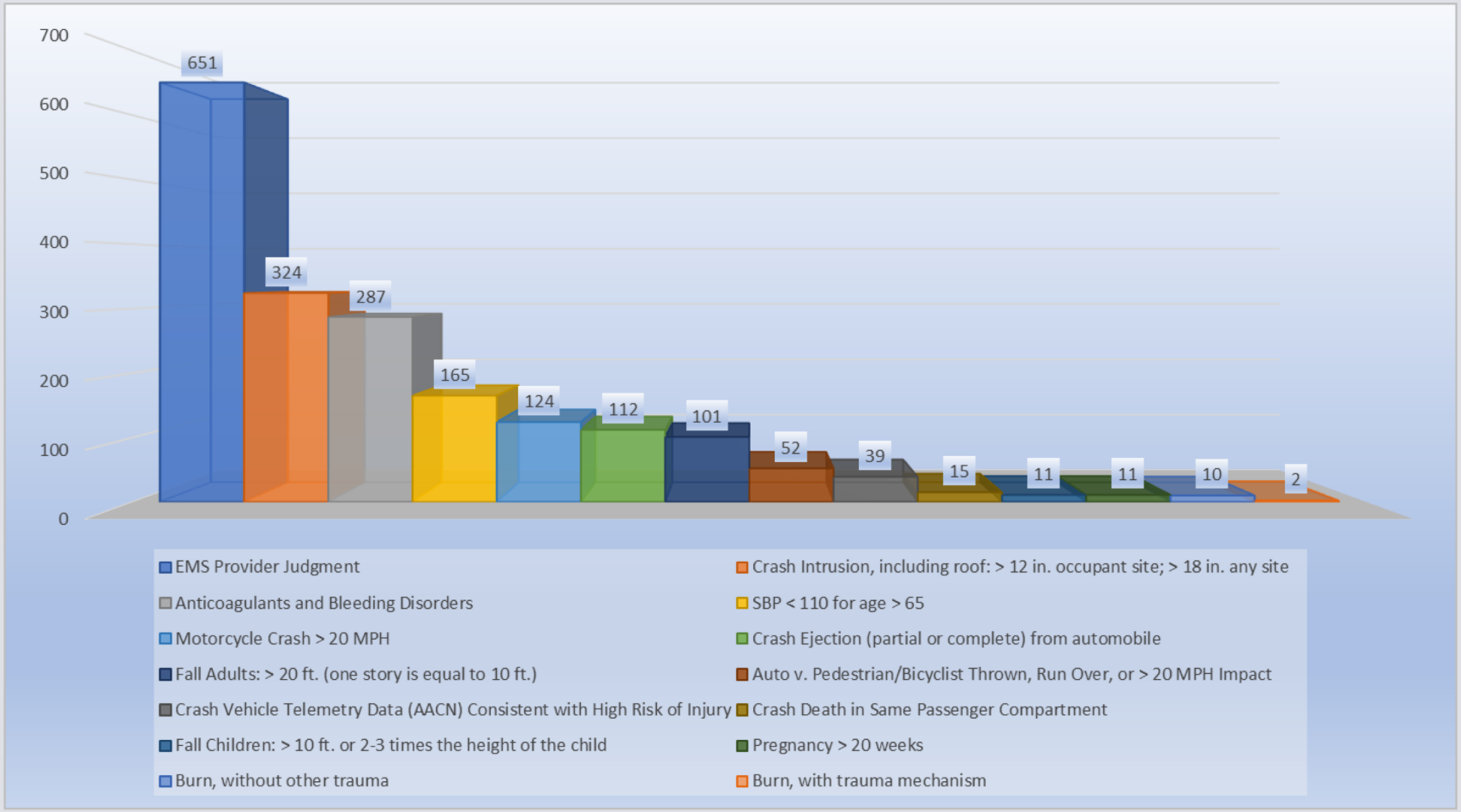
**Gender**



# EMS Update



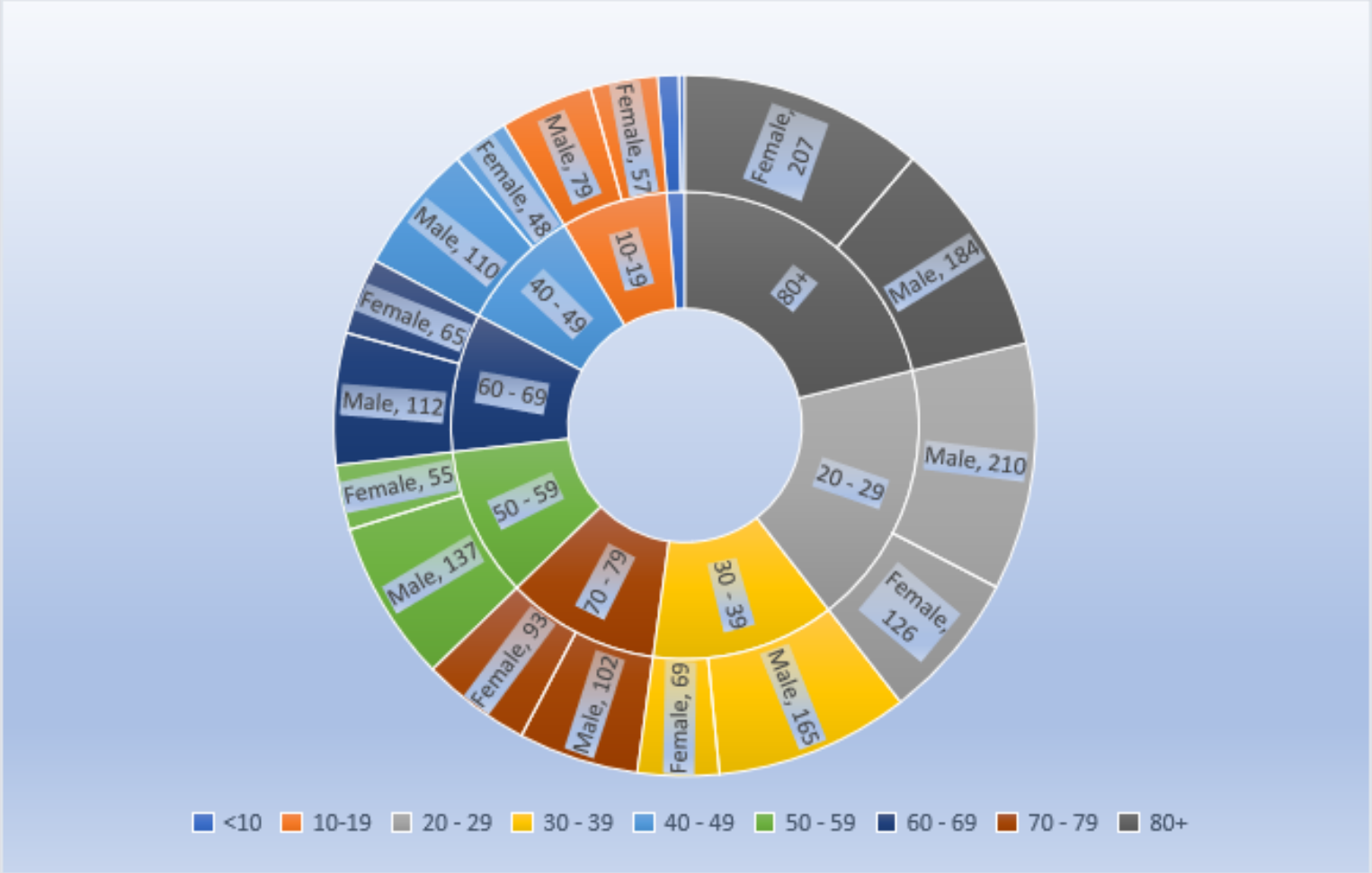
## Injury Vehicle, Pedestrian or Other Risk Factors



# EMS 2021 3rd Quarter Traffic Statistics



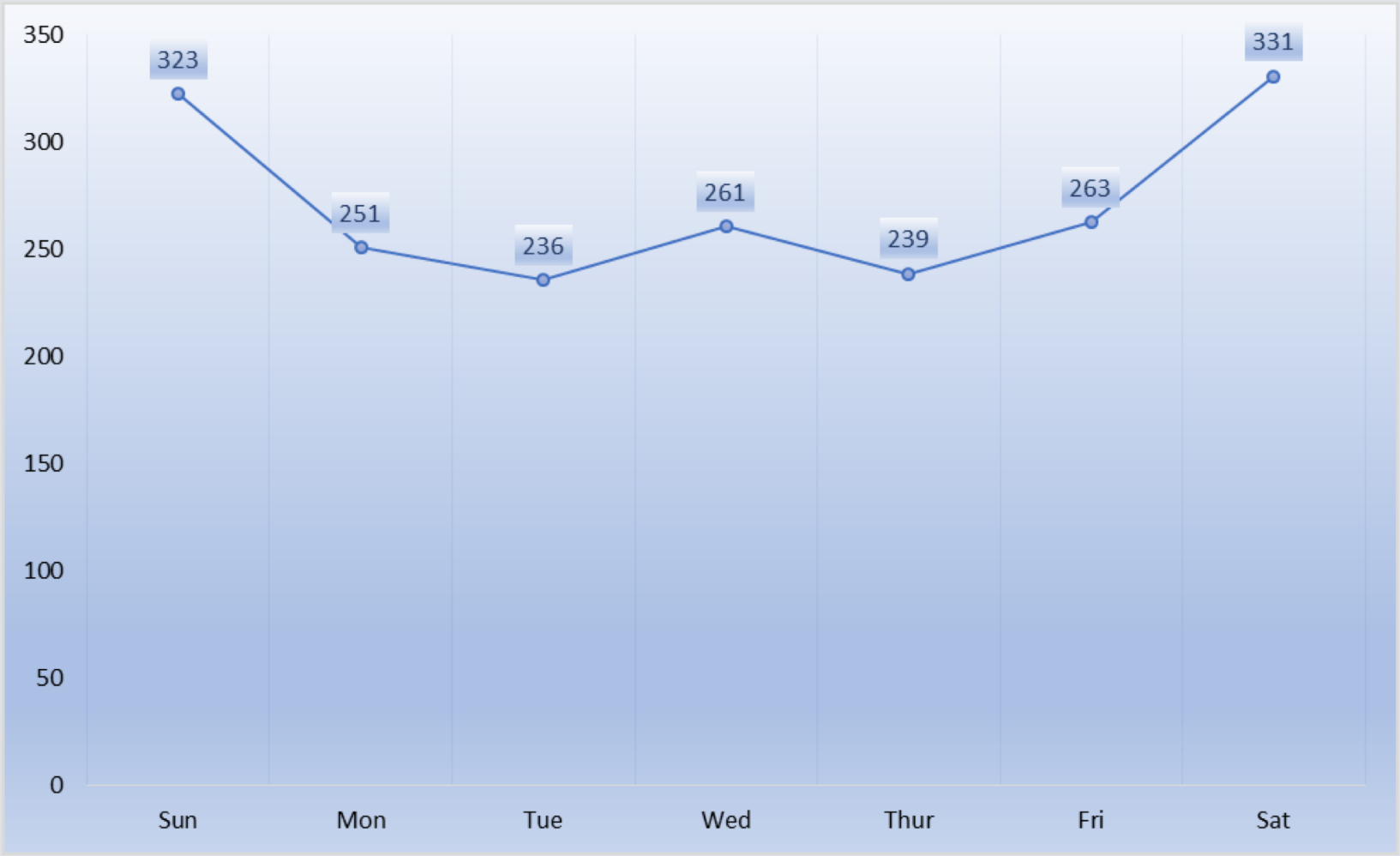
## Pedestrian Pedal Bicyclist Injuries by Age and Gender



# EMS 2021 3rd Quarter Traffic Statistics



## Pedestrian and Bicyclist Injuries – Day of the Week



# EMS 2021 3rd Quarter Traffic Statistics

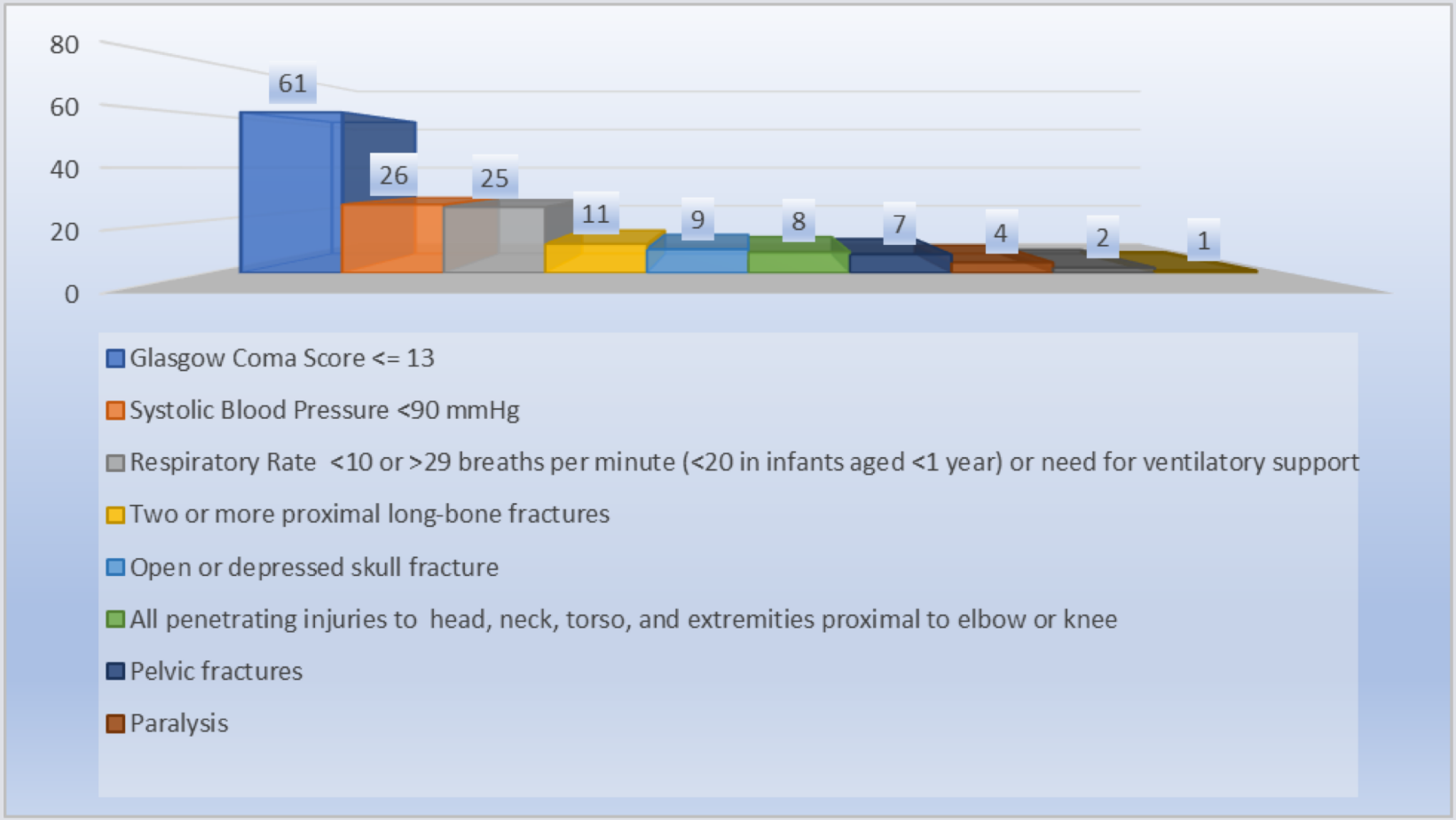


## Pedestrian and Bicyclist Injuries – Time of Day

# EMS 2021 3rd Quarter Traffic Statistics



## Trauma Center Criteria



# Law Enforcement



Bridgeport PD – Officer Paul Cari

Windsor Locks – Officer Chick Bistany

Stamford PD - Sgt. Jeffery Booth

# Crash Stats



## Early Estimate of Motor Vehicle Traffic Fatalities in 2020

A statistical projection of traffic fatalities for 2020 shows that an estimated 38,680 people died in motor vehicle traffic crashes. This represents an estimated increase of about 7.2 % as compared to the 36,096 fatalities reported in 2019

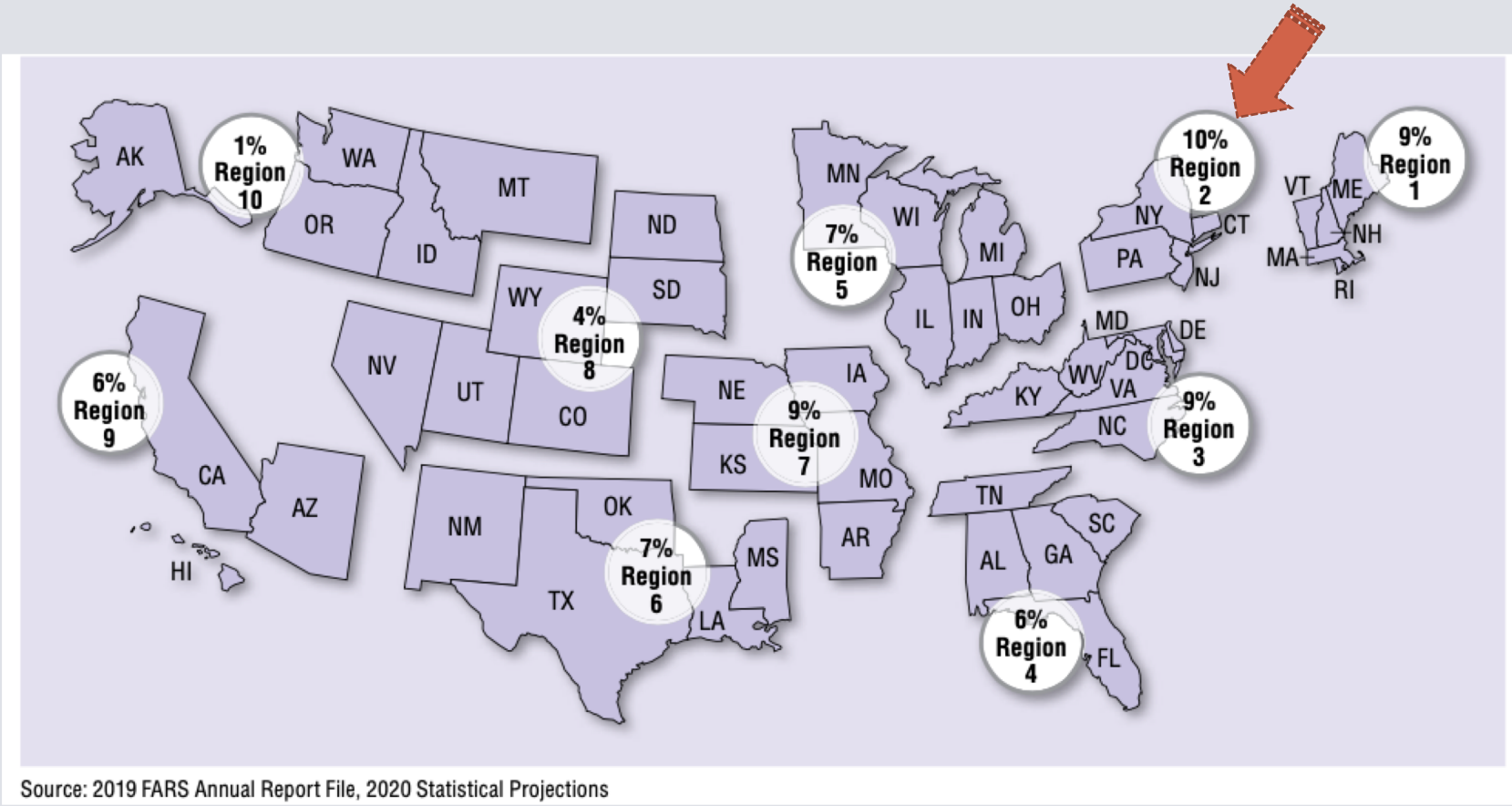
Preliminary data from the Federal Highway Administration (FHWA) shows vehicle miles traveled (VMT) in 2020 decreased by about 430.2 billion miles, or about a 13.2-percent decrease.

All 10 NHTSA Regions experienced increases during 2020 compared to reported totals during 2019. The statistical procedures employed in these projections were generated for each NHTSA administrative Region and were collated to create the national estimate.

# Regional Differences



## Estimated % changes in fatalities by NHTSA Region

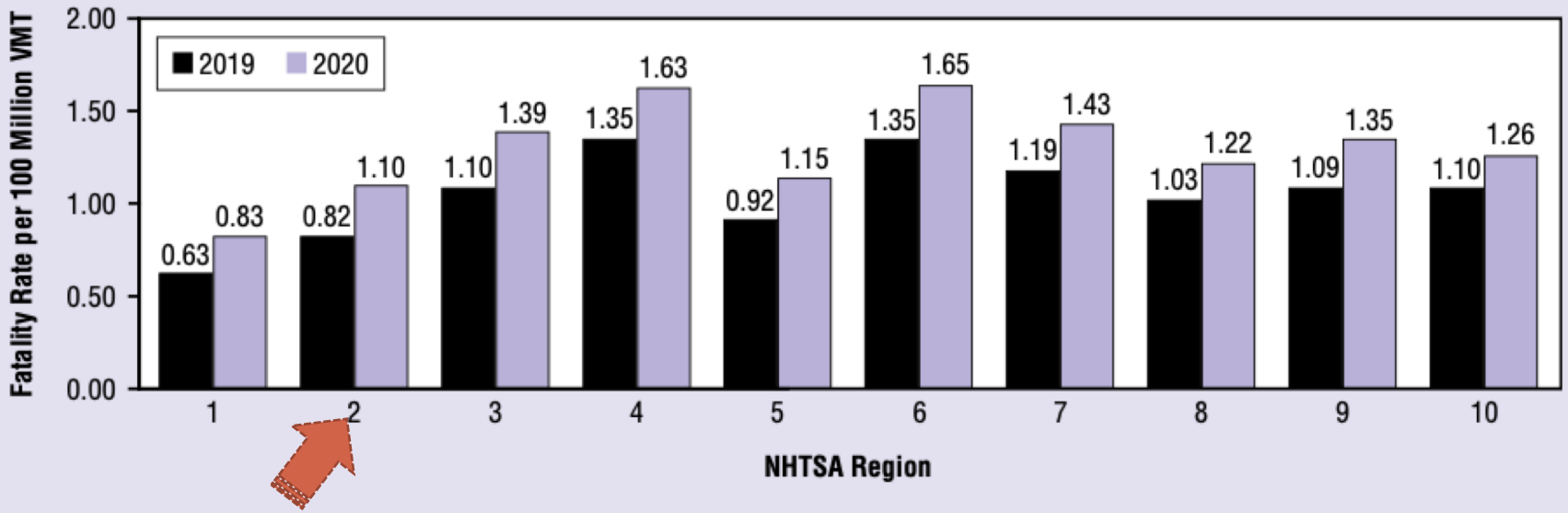



Source: 2019 FARS Annual Report File, 2020 Statistical Projections

# Regional Differences



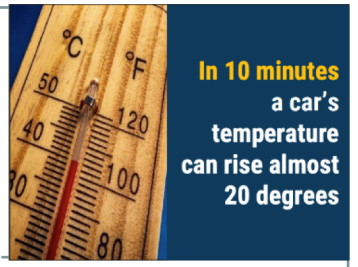
**Comparison of estimated fatality rate per 100 million VMT in 2020 with reported 2019 fatality rate per 100 VMT by NHTSA Region**




Source: 2019 FARS Annual Report File, 2020 Statistical Projections. FHWA December 2020 Traffic Volume Trends for 2019 & 2020 VMT

This Crash Stats and other general information on traffic safety can be found at https://crashstats.nhtsa.dot.gov/

# In Heat of Summer



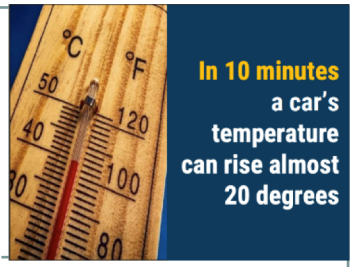



Hot – Car Death By The Numbers :

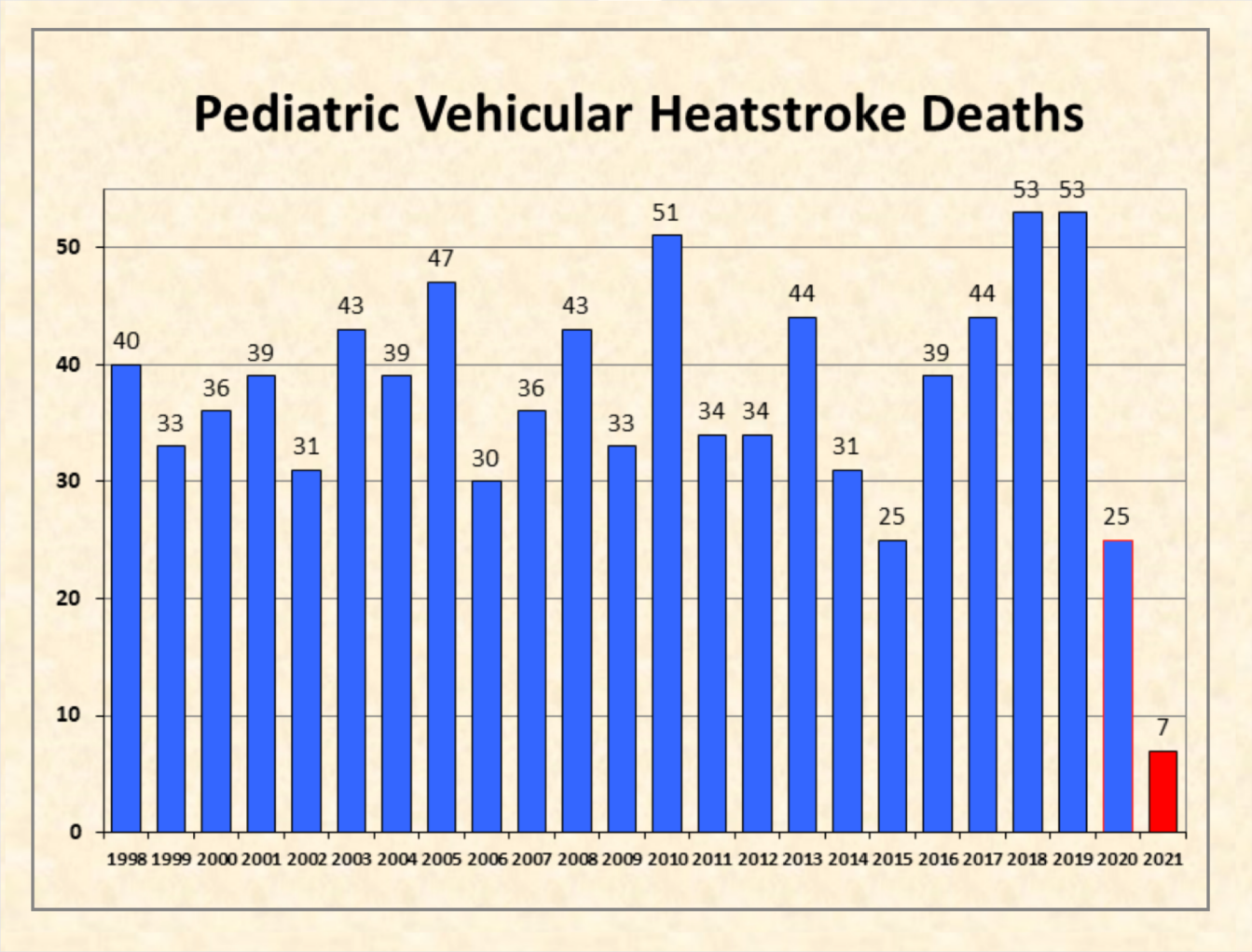
Since 1998, almost 890 children have died of pediatric vehicular heatstroke because they were left or became trapped in a hot vehicle, according to noheatstroke.org.

Total number of U.S. pediatric vehicular heatstroke deaths, 2021**: 7**
Total number of U.S. pediatric vehicular heatstroke deaths, 2020: **25**
Total number of U.S. pediatric vehicular heatstroke deaths, 1998-present: **890**
Average number of U.S. child heatstroke fatalities per year 1998-2020: **38**

# In the Heat of Summer





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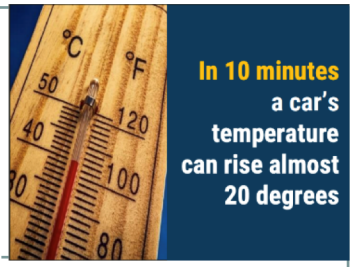





## CIRCUMSTANCES

An examination of media reports about the 890 pediatric vehicular heatstroke deaths for a 23 year period (1998 through 2020) shows the following circumstances:

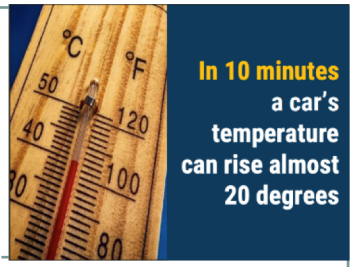
- 52.9% - Forgotten by caregiver (471 children)

- 25.6% - Gained Access on their own (228)

- 19.7% - Knowingly left by caregiver (176)

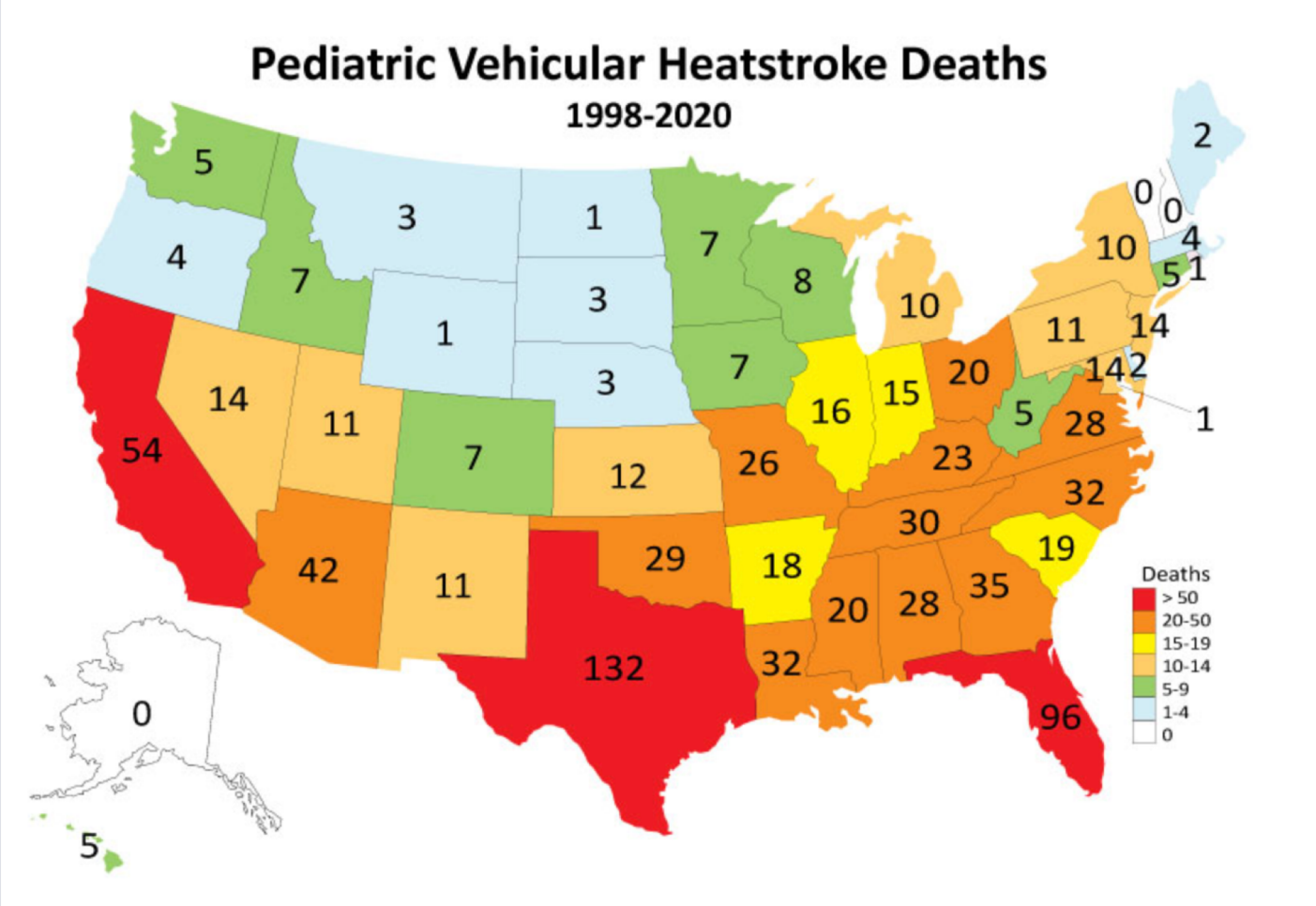
- 1.7 % - Unknown (15)

# In the Heat of Summer

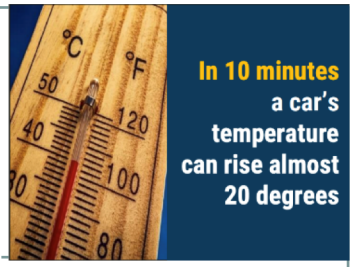





## Deaths by State



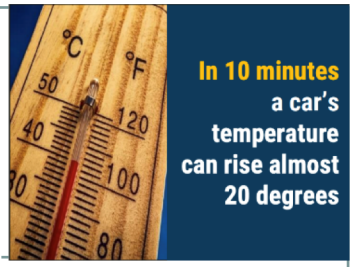
# In the Heat of Summer






- Temperatures in Connecticut are rising as summer 2021 hits full force
- Connecticut totaled **five (5)** hot car deaths among victims 14 years old or younger from 1998 to 2020, according to NoHeatStroke.org
- The youngest child to die in a hot car in Connecticut, a Ridgefield boy, was only 15-months-old. The oldest was five, a boy living in Waterbury.
- A child's body temperature rises three to five times faster than that of an adult, according to the National Highway Traffic Safety Administration (NHTSA)

# In the Heat of Summer



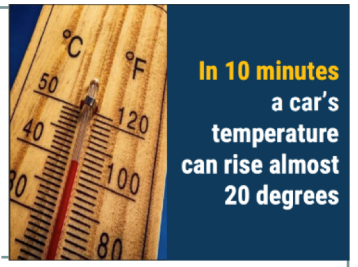



NHTSA has issued renewed reminders and tips to help parents and other caregivers prevent leaving children in cars during hot weather.

From NHTSA:

- Never leave a child in a vehicle unattended — even if the windows are partially open or the engine is running and the air conditioning is on.
- Make it a habit to check your entire vehicle — front and back — before locking the door and walking away. Train yourself to "Park, Look, Lock," or always ask yourself, "Where's Baby?"
- Ask your child care provider to call if your child doesn't show up for care as expected.
- Place a personal item such as a purse or briefcase in the back seat, as another reminder to look before you lock. Write a note or place a stuffed animal in the passenger's seat to remind you that a child is in the back seat.
- Store car keys out of a child's reach and teach children that a vehicle is not a play area.

# In the Heat of Summer






IF YOU SEE A CHILD UNATTENDED IN A HOT VEHICLE CALL

9-1-1

# Upcoming Traffic Records Assessment Preparation

# Traffic Records Assessment Schedule Overview



State Traffic Records Assessment Program (STRAP)

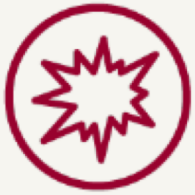
Proposed Traffic Records Assessment Calendar for Connecticut

| | Mo | Tu | We | Th | Fr | Sa | Su | |
|---|---|---|---|---|---|---|---|---|
| | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| Aug-21 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | |
| | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 1-Month Call/ Coordinator Training |
| | 23 | 24 | 25 | 26 | 27 | 28 | 29 | |
| | 30 | 31 | 1 | 2 | 3 | 4 | 5 | |
| | 6 | 7 | 8 | 9 | 10 | 11 | 12 | Federal Holidays |
| Sep-21 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | Kickoff Meeting |
| | 20 | 21 | 22 | 23 | 24 | 25 | 26 | Round 1 Respond |
| | 27 | 28 | 29 | 30 | 1 | 2 | 3 | Round 1 Assess |
| | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| Oct-21 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | |
| | 18 | 19 | 20 | 21 | 22 | 23 | 24 | Review Interim Ratings |
| | 25 | 26 | 27 | 28 | 29 | 30 | 31 | Mid-Point/ Check In Meeting |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Round 2 Respond |
| Nov-21 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | |
| | 15 | 16 | 17 | 18 | 19 | 20 | 21 | Round 2 Assess |
| | 22 | 23 | 24 | 25 | 26 | 27 | 28 | |
| | 29 | 30 | 1 | 2 | 3 | 4 | 5 | Facilitator's Round |
| Dec-21 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | NHTSA Review Deliver Final Report |
| | 13 | 14 | 15 | 16 | 17 | 18 | 19 | Report Out Webinar |
| | 20 | 21 | 22 | 23 | 24 | 25 | 26 | |
| | 27 | 28 | 29 | 30 | 31 | 1 | 2 | |

# Scope of the Assessment



## Six Core Data Systems



CRASH

DRIVER

VEHICLE

ROADWAY

CITATION/ ADJUDICATION

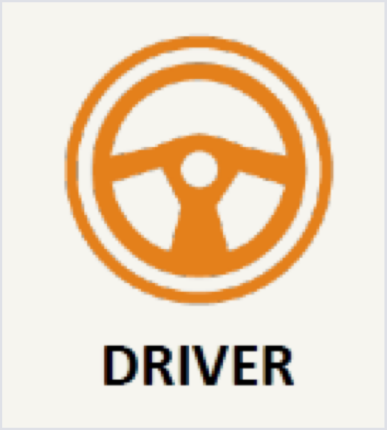
INJURY SURVEILLANCE

**TRCC Management** **Data Use & Integration** **Strategic Planning**

# Roles & Responsibilities



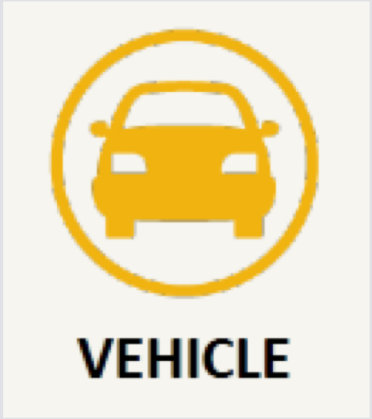

Kerry Ross/ Dr. Eric Jackson




George White

# Roles & Responsibilities






George White


Al Lallonardo/ Joseph Ouellette

# Roles & Responsibilities



**CITATION/ ADJUDICATION**

Stacey Manware

**INJURY SURVEILLANCE**

Heidi Fitzgerald

# Roles & Responsibilities



## OTHER AREAS

TRCC - Flavia Pereira/Femi Bajomo

Strategic Planning for Traffic Records Systems - Flavia Pereira/Femi Bajomo

Data Use and Integration – SHSO Program Manager/State CIO/Femi Bajomo

# Traffic Records Assessment Questions

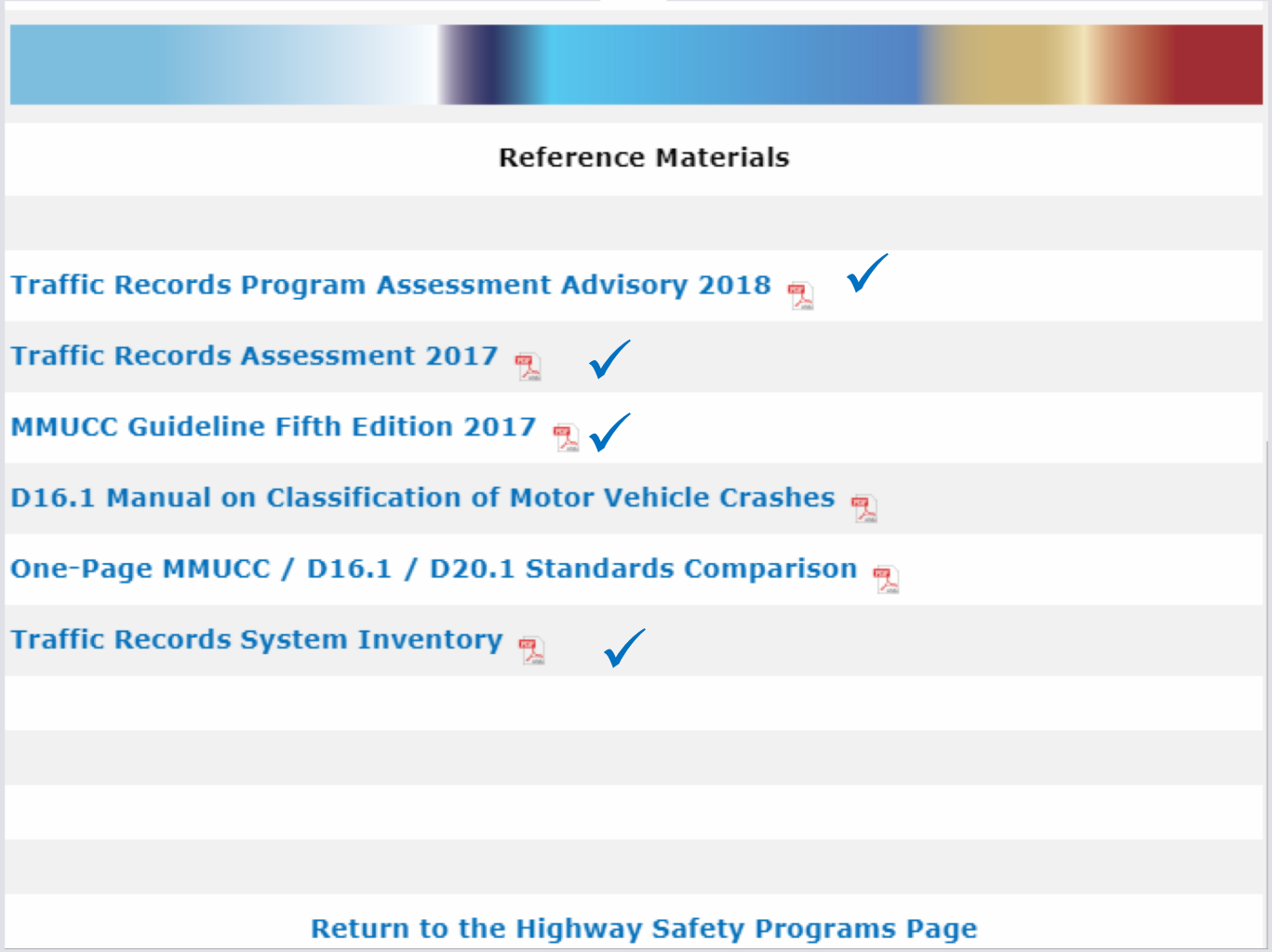


| | |
|---|---|
| TRCC Management | 16 |
| Strategic Planning | 11 |
| Crash | 48 |
| Driver | 41 |
| Vehicle | 36 |
| Roadway | 34 |
| Citation / Adjudication | 50 |
| Injury Surveillance | 80* |
| Data Use & Integration | 12 |
| Total | 328 |

* Injury Surveillance now includes sub-sections on EMS, Emergency Room, Hospital Discharge, Trauma Registry, and Vital Records

# TRCC Website






http://www.ct.gov/dot/cwp/view.asp?a=2094&q=435916

# TRCC Website Contd..



**Reference Materials**

- Traffic Records Program Assessment Advisory 2018
- Traffic Records Assessment 2017
- MMUCC Guideline Fifth Edition 2017
- D16.1 Manual on Classification of Motor Vehicle Crashes
- One-Page MMUCC / D16.1 / D20.1 Standards Comparison
- Traffic Records System Inventory

Return to the Highway Safety Programs Page

# Open Forum



General Discussion/Meeting Adjourned

Be Safe & Stay Healthy!!!